

ABSTRACT OF THE DISCLOSURE

An apparatus and method that optimizes the data rate for forward link data transmissions in a spread-spectrum communications system **106** is provided. The spread-spectrum communications system **106** comprises a wireless infrastructure **103**, at least one wireless mobile receiving device **105**, and an radio frequency (RF) forward link **104** between the wireless infrastructure **103** and the wireless mobile receiving device **105**. The data rate of the RF forward link **104** is optimized in the wireless infrastructure **103** by estimating or measuring the bottleneck link speed of the data transmission and adjusting the data rate for the RF forward link **104** according to several embodiments of a data rate optimization algorithm. The algorithm creates an optimum range for the data rate of the RF wireless link **104** which maximizes system capacity and reduces transmission delays to the wireless mobile receiving device **105**. When appropriate, the data rate of the RF forward link **104** is decreased to remain within the optimized range, thereby increasing system capacity without impacting the performance perceived by a user at the wireless mobile receiving device **105**. Conversely, if necessary, the data rate is increased to remain with the optimized range, thereby reducing transmission delays to the wireless mobile receiving device **105**.